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EXAMINER

KHAN, MEHMOOD B

ART UNIT

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2617

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/551,485	Applicant(s) CHIA ET AL.	
	Examiner MEHMOOD B. KHAN	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Arguments

Applicant's arguments filed 01/07/2011 have been fully considered but they are not persuasive. Applicants argue against Minde and Kalliokulju in the remarks stating that the amended limitations are not taught or suggested by the combination of the applied prior art.

The Examiner respectfully disagrees. Please see the discussion below regarding the amended limitations. Please also see the newly applied prior art of Rosemarjin et al., with respect to the new claims.

Applicants argue in the remarks that the claims were amended reciting a database connected to the network that is configured to store subscriptions.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a database) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 46, 47, 48, 50 and 51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 46 recites the limitation "informs the central controller and then replies to the terminal with a QoS control capability embedded in an acknowledgement message" which has

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no support in the submitted specification. Claims 48 and 50, contain the limitation of “informs the central controller”. Furthermore, the client states in the remarks that the new claims, claims 46-51 correspond to the original claims 17 and 23. In claim 17, there is no support for informing the central controller by the session control server and there is no support for sending an acknowledgement from the session control server to the terminal. Thus claims 46, 48 and 50 contain new matter.

Claim 47 recites the limitation "when an access control server....and then replies to the terminal with access control reply with tunneling channel information..." which has no support in the submitted specification. In claim 23, there is no support for an access control server replying to the terminal with access control reply with tunneling channel information. Thus claim 47 contains new matter.

The above claims should be amended to resolve the new matter issues or cancelled. All amendments should correspond with the submitted specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 47 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 recites the limitation "a QoS capability" in line 7 of the claim, making the claim indefinite. Since it is unclear whether this is the same or a different QoS capability as recited in lines 2 and 6.

Claim 47 recites the limitation “receives the tunneling information is received” which makes the claim indefinite. It is unclear as to which element receives the tunneling information, i.e. central controller or the terminal. Appropriate correction is required.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minde et al. (WO 00/33511 herein Minde) in view of Kalliokulju et al. (US 6,618,591 herein Kalliokulju).

Claim 40, Minde discloses a terminal (**Pg 5: 21-24, Fig. 1: 101, 102, telephone, etc.**) that is capable of performing QoS control (**Pg 6: 5-8, measure link parameters, measure device parameters, thus performing QOS control**), comprising:

a monitor module configured to collect QoS information of the terminal (**Pg 6: 5-8, make measurements on end-user quality of service (QOS), since measuring and reporting thus collection of QOS and monitor module is thus inherent**) and monitors whether QoS statistics exceed predetermined threshold values (**Pg 11: 16-19, reported, thus monitors, end-user quality of service exceeds a threshold value**);

a communication module configured to report the QoS information collected by the monitor module (**Pg 6: 5-8, send reports on measured data, since sending reports thus communication module**) to a central controller (**Pg 6: 5-8, service quality supervisor (SQS) connected to said terminal via the network (Pg 6: 5-8, since sending reports, thus connection via the network)**) and receive QoS enforcement instructions via the network (**Pg 4: 9-12, sending commands**) from the central controller (**Pg 4: 9-12, sending commands by a service quality supervisor (SQS)**); and

an enforcement module configured to regulate (**Pg 10: 10-13, adjust**) a behaviour of the terminal (**Pg 10: 10-13, device transmission parameters**) according to the QoS enforcement instructions (**Pg 10: 10-13, commanding**) received by the communication module (**Pg 10: 10-**

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13, Dynamic adaptation sent to the endpoints, thus received by communications module, commands the endpoints to adjust device transmissions); Minde discloses wherein, when the monitor module detects threshold violation where the QoS statistics exceed the predetermined threshold values **(Pg 11: 16-19, reported, thus monitors, end-user quality of service exceeds a threshold value).**

Minde does not explicitly disclose the enforcement module performs traffic regulation to correct the threshold violation based on the QoS information.

In an analogous art, Kalliokulju discloses the enforcement module performs traffic regulation to correct the threshold violation based on the QoS information **(Col 2: 30-40, when an error rate threshold (QoS statistic) is exceeded, a command from the RAN reduces the bit rate of the connection, Col 1: 56- Col 2: 10, error rate is collected and compared to error rate threshold (i.e. QoS information), when error rate exceeds threshold, then using lower bitrate).** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Minde to measure error rate and reduce the bit rate of a connection as taught by Kalliokulju so as that the error rate no longer exceeds the error rate threshold **(Col 2: 38-40).**

Claim 41, Minde discloses wherein the monitor module collects the QoS information on Individual service sessions **(Pg 7: 10-24, applications, thus individual service sessions).**

Claim 42, Minde discloses wherein the enforcement module compares a value indicated by the QoS enforcement instructions **(Pg 16: 5-10, command received from SQS)** to a current measurement measured by the monitoring module **(Pg 16: 5-10, limits imposed by last command from SQS)**, and adjusts QoS parameters to regulate the behaviour of the terminal if necessary **(Pg: 16: 10-15, service is adapted).**

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Claim 43, Minde does not explicitly disclose wherein the enforcement module comprises at least any one of the following means: means for classifying packets into different priorities within the terminal; means for managing dropping of packets within the terminal when resource quota allocated to the terminal is used up; means for reducing congestion at the terminal by lowering a transmission rate; means for reducing congestion at the terminal by delaying transmission of packets when insufficient resource is allocated to the terminal; means for terminating sessions and stopping transmission of packets; means for reducing outgoing traffic by limiting total number of outgoing sessions; means for reducing incoming traffic by limiting total number of incoming sessions; and means for reducing incoming traffic by requesting for less incoming traffic.

In an analogous art Kalliokulju, wherein the enforcement module comprises at least any one of the following means: means for terminating sessions and stopping transmission of packets (**Col 2: 30-40, until the connection is terminated**). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Minde to measure error rate and reduce the bit rate of a connection as taught by Kalliokulju so as that the error rate no longer exceeds the error rate threshold (**Col 2: 38-40**).

Claim 44, as analyzed with respect to the limitations as discussed in claim 40.

Minde discloses a central database (**obvious since predetermined end-user QOS implies subscription and service level agreement**) configured to store subscription information of a user who uses the terminal and service level agreement information (**Pg 11: 6-13, end-user threshold**); and

central controller give QoS enforcement instructions to the terminal according to the QoS information, the subscription information and the service level agreement information stored in the central database (**Fig. 5: 525, adapt service command based on EuQOS**).

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Claim 45, as analyzed with respect to the limitations as discussed in claim 40 and 44.

Claim 46, Minde discloses wherein the terminal embeds QoS control capability information (**Pg 15: 1-2, reports received**) in a session control message (**Pg 15: 1-2, since report received, thus session control message**) and sends this information to a session control server (**Pg 15: 1-2, reports from terminals and gateways, since gateway is situated in between the terminal and SQS, thus session control server**) during session initiation (**Pg 7: 15, access**), and

wherein the terminal, in case that the central controller initiates a monitor session when the session control server detects the QoS control capability information (**Pg 15, 1-18, SQS analyzes reports, thus central controller monitors a session, Pg 15: 1-2, session control server receives the report, due to the fact it is in between the SQS and terminal, thus detects the QoS control capability information**), informs the central controller (**Pg 15, 1-2, inherent, since the report has to be passed on to the SQS**) and then replies to the terminal with a QoS control capability embedded in an acknowledgement message (**Pg 13: 27-28, adapt service command, thus QoS control capability and acknowledgement**), initiates the QoS control module when the acknowledgement message contains the QoS control capability information (**Pg 15: 19-28, adjust transmission so as to improve end user quality**), and

whereby a communication channel between the QoS control module in the terminal and the central controller for performing QoS control is established (**implied since the above discussion shows a report is sent and an adapt service command is received, thus a communication channel is established**).

Claim 48, as analyzed with respect to the limitations as discussed in claim 46.

Claim 50, as analyzed with respect to the limitations as discussed in claim 46.

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Claims 47, 49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minde in view of Kalliokulju in view of Rosemarjin et al. (US 2002/0151312 herein Rosemarjin).

Claim 47, as analyzed with respect to the limitations as discussed in claim 46. Minde discloses wherein the terminal requests for a QoS control service during an access control process when the terminal attaches to a network (**Pg 7: 15, access delays, since access delays, thus access control and attaching to a network**), and

Minde in view of Kalliokulju does not explicitly disclose replies to the terminal with an access control reply with tunnelling channel information, receives the tunneling channel information is received, whereby a tunneling channel is set up between the QoS control module at the terminal and the central controller using the tunneling channel information.

In an analogous art, Rosemarjin discloses replies to the terminal with an access control reply with tunnelling channel information, receives the tunneling channel information is received (**0036, GTP set up response towards the UE, thus reply with tunnelling channel information**),

whereby a tunneling channel is set up between the QoS control module at the terminal and the central controller using the tunneling channel information (**0036, data path, GTP tunnel, setup between the UE and called party**). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Minde in view of Kalliokulju to provide tunneling as shown by Rosemarjin so as to provide a secure path.

Claim 49, as analyzed with respect to the limitations as discussed in claim 47.

Claim 51, as analyzed with respect to the limitations as discussed in claim 47.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to

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expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHMOOD B. KHAN whose telephone number is (571)272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B. K./
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617